IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Serial No.:	10/732.971
Appellant:	Randall W. Sencaj, et al.
Title:	ROUTE SEQUENCE VIEWING IN NAVIGATION SYSTEM
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Attorney Docket:	DP-309792

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

REVISED APPEAL BRIEF

Dear Sir:

Further to the Notice of Appeal filed July 19, 2006, Applicants herewith respectfully present their Brief on Appeal revised in accordance with a Notification of Non-Compliant Appeal Brief under 37 C.F.R. § 1.136 mailed 17 February 2009.

The Commissioner is hereby authorized to charge any fees associated with the filing of the Appeal Brief to Deposit Account No. 50-0831.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Delphi Technologies, Inc. by assignment from the inventors, Randall W. Sencaj; Mark A. Kady; Victor V. Chernetsky; Spiros Triantafyllopoulos; David D. Kiel; and Dehua Cui.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences know to Applicants, Applicants' legal representatives, or assignee that will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-31 and 39-44 are pending in the application and are set forth in Appendix A.

Claims 1-13, 27-31, and 39-44 are withdrawn, pursuant to a Restriction Requirement mailed November 2, 2005.

Claims 14-26 stand finally rejected. Applicants appeal the final rejection of all claims 14-26.

IV. STATUS OF AMENDMENTS

Amendments to claims 14-26 were presented in Applicants' Amendment mailed August 4, 2005, and have been entered. A corrected listing was presented in the Reply to Notice of Non-Compliant Amendment mailed August 30, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 14 is directed to Applicants' navigation system for use in a vehicle. Referring to Fig. 1, the navigation system 10 includes a display screen 26, see paragraph 0025; a global positioning system (GPS) receiver 22, a data retrieval device that retrieve data from a data storage medium, e.g., data base 24, see paragraphs 0022 and 0024, and a processor-based subsystem 12, see paragraph 0021. The navigation data is a sequence of route segments, see Figs. 3 and 4 and paragraphs 0034 and 0035. The processor-based subsystem comprises a graphic user interface (GUI) 30 for outputting a GUI screen to the display screen 26, paragraph

0026. After determining the position of the vehicle, step 50 in Fig. 2, the processor-based subsystem identifies the route segment upon which the vehicle is located, step 52, and renders a screen with the identified route segment, step 54. However, the system is not limited to displaying only the route segment with the vehicle. The subsystem is configured also to determine GUI screens for other route segments, such as segments 72, 74 and 76. When the user provides input from a device, such as device 38, the subsystem is able to display a second GUI screen with a previous or subsequent route segment other than the (first) GUI screen with the vehicle location.

Claims 15-20 are dependent upon claim 14, and so are distinguished by the elements of the independent claim. In particular, claim 20 more particularly points out that the input device that the user uses to provide the input to render a screen other than the identified route segment with the vehicle location is a keypad, a knob or an audio input device, see paragraph 0031.

Claim 21 is directed to Applicants' navigation system and calls for elements similar to claim 14, but recites additional features of the elements. Claims 22-26 are dependent upon claim 21 and so are distinguished by the elements of that claim. Claim 26 recites preferred input devices, similar to claim 20.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 14-26 are rejected under 35 U.S.C. § 102(b) as anticipated by Millington (U.S. 6,397,145 B1).

VII. ARGUMENT

1. MILLINGTON DOES NOT DESCRIBE A NAVIGATION SYSTEM THAT ALLOWS A USER TO SELECT THE ROUTE SEGMENT TO BE DISPLAYED SO AS TO DISPLAY A SEGMENT THAT DOES NOT INCLUDE THE VEHCILE POSITION, AND SO DOES NOT ANTICIPATE APPLICANTS' SYSTEM

Many vehicles are equipped with navigational systems that display a map showing the position of the vehicle. Some systems also show a recommended route to a desired destination, based upon input from the driver and other factors, such as shortest distance, shortest time, etc. In comparing the cited Millington patent and Applicants' system, the manner in which they prefer to display information about the route is different. The type of system in Millington zooms in and out between a large scale map and maneuver instructions. See the application, paragraph 0003. Applicants' system indexes through a sequence of screens, each showing a segment of the route at a scale that is more readily comprehensible by the user, see paragraph 0004. Applicants' invention is to allow the user to view the overall route by scrolling through the sequence of screens. Since Millington provides a large scale map, it sees no need for the user to view other screens, and so does not provide for the user to do so.

More particularly, in Millington, after the recommended route is determined, the route is displayed as a large-scale map, col. 2, lines 13-14. A large scale map display is illustrated in Fig. 2. The map includes the current position of the vehicle, at icon 52, col. 4, lines 17-19. As the vehicle travels and approaches a maneuver, the display switches to show a maneuver instruction, col. 2, lines 13-17, and col. 5, lines 17-20. The immediate concern in Millington is directed to the display of complex maneuvers, as when two or more maneuvers are required over a short distance, col. 2, lines 42-45. To show the maneuvers, the system in Millington provides an enlarged view of the portion of the route, see Figs. 4 and 5. It is significant that the decision to display the complex maneuver is made by the system, col. 5, lines 17-23, and that display of the upcoming maneuver is based on and includes the current position of the vehicle.

In Applicants' system, the processor divides the route into a sequence of route segments

and formulates a GUI screen for each segment, paragraph 0004. As the car travels, the system indexes through a sequence of displays, each display corresponding to a GUI screen with a segment of the route. In accordance with Applicants' invention, the user can, through his or her input, cause the system to display a GUI screen that does not include the route segment with the position of the vehicle. In this manner, the user can scroll forward or backward to see previous route segments or subsequent route segments, see paragraph 0017. When Millington zooms in, it only shows the portion of the route that is of current interest, i.e., the current maneuver based on the current position of the vehicle. Moreover, the display in Millington is controlled by the processor, not the user. Nothing in Millington allows the user to input an instruction to change the display to a portion of the route does not include the current position or mancuver, i.e., the display determined by the CPU. Thus, Millington does not anticipate, or even suggest, Applicants' invention.

The rejection points to Figs. 4 and 5 in Millington. Millington describes that, when a complex maneuver is approaching, the CPU switches the display from the view in Fig. 2 to the view in Fig. 4, col. 5, lines 17-20. As can be seen in Fig. 2, at the time of the switch to Fig. 4, the vehicle is currently executing the instruction 70' that includes maneuver A. Thus, the display includes the route segment on which the vehicle is located. When the user completes the first maneuver instruction 70', the first maneuver instruction disappears, and only instruction 70" remains, col. 5, lines 60-63. With regard to Fig. 5, the system shifts the display to Fig. 5 *while the vehicle 21 is in the process of completing the second maneuver instruction 70"*, col. 6, lines 41-45. Thus, the display in Fig. 5 includes the route segment with the then-current position of the vehicle. Millington does not display a screen that does not include the current position or maneuver. Furthermore, the CPU switches the display from Fig. 2 to Fig. 4, col. 5, lines 17-20. Millington does not allow the user to change the display to a screen other than the one selected by the processor with the current position or maneuver.

Claim 14 is directed to Applicants' navigation system that includes a processor-based subsystem that displays a first or a second GUI screen. The first GUI screen includes an identified route segment on which the vehicle is located, which might be viewed similar to the display in Millington. However, the claim also calls for a second GUI screen that does not

include the identified route segment. In accordance with the claim, the system renders the second GUI screen in response to user input. In the Millington system, the CPU determines the displayed view. Millington does not provide any means for the user to display another screen, one not determined by the CPU, one without the current position or maneuver. When Fig. 4 is displayed, Millington does not provide an option to view Fig. 5 to anticipate the next maneuver. After maneuver A is completed, and the CPU determines to display Fig. 5, the user of the Millington system cannot again view Fig. 4. Thus, Millington is not configured to receive user input and render a second GUI screen that does not include the identified route segment on which the vehicle is located. Without this feature, Millington does not anticipate, or even suggest, Applicants' invention in claim 14.

Claims 15-20 are dependent upon claim 14 and not anticipated by Millington for the reasons set forth with regard to that claim.

In addition, it is noted that claim 20 calls for an input device that is a keypad, a knob or an audio input device. Per claim 14, the user input to the input device causes the system to render the second GUI screen that does not include the route segment on which the vehicle is located. Millington does not have a key or knob that the user can operate to override the CPU and change the display. Nor does it accept a voice command to do this. Thus, Millington does not anticipate elements in claim 20 that perform the function called out in claim 14.

Claim 21 is directed to Applicants' navigation system, which, like claim 14, is configured to receive user input and display a second GUI screen that does not include the location of the vehicle. For the reasons above, Millington is limited to displaying only the view that includes the current maneuver or instruction, as determined by the CPU. Millington does not allow the user to switch views and so does not teach or suggest Applicants' claim 21, or dependent claims 22-26.

Further, it is noted that claim 26 calls for an input device that is a keypad, a knob or an audio input device, like claim 20, and so is not described by Millington for the reasons above.

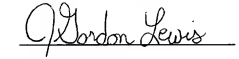
VIII. CONCLUSION:

For the reasons set forth above, it is respectfully requested that the Applicant's invention, as set forth in claims 14 – 26 patentable defines over Millington and is not disclosed or suggested thereby. As such, it is respectfully submitted that the Examiner's final rejection of claims 14 – 26 is erroneously based and its reversal is respectfully requested.

No oral hearing is requested.

The Commissioner is hereby authorized to charge any fees associated with this communication and/or credit any overpayments to Deposit Account No.: 50-0831.

Respectfully submitted,



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APPENDIX INDEX

APPENDIX A: CLAIMS AT ISSUE ON APPEAL

1. (Withdrawn) A method to display a route comprising a sequence of route segments to be traveled by a vehicle, the method comprising:

providing a graphic user interface (GUI) having a display screen adapted to render an output of the GUI;

determining a plurality of route segments for the route;

determining a plurality of GUI screens for the route segments such that each route segment is represented in a distinct GUI screen;

determining a position of the vehicle;

identifying a route segment based upon the position of the vehicle;

rendering, on said display screen, a GUI screen corresponding to the identified route segment;

receiving a user input via an input device; and

based upon said user input, rendering a GUI screen corresponding to a previous route segment or a subsequent route segment that does not include the position of said vehicle.

2. (Withdrawn) The method of claim 1, further comprising identifying a subsequent route segment in response to movement of the vehicle and rendering GUI screens of said subsequent route segment.

3. (Withdrawn) The method of claim 1, wherein the GUI screen corresponding to the identified route segment comprises:

a display area having a top edge; and

a graphic representation of the vehicle rendered within the display area.

4. (Withdrawn) The method of claim 3, wherein the graphic representation of the vehicle is substantially centered relative to the display area.

5. (Withdrawn) The method of claim 3, wherein the top edge of the display area is associated with one of a north cardinal direction and a forward direction of travel.

6. (Withdrawn) The method of claim 1, wherein rendering a GUI screen corresponding to the previous route segment or the subsequent route segment comprises rendering at least one of an immediately previous route segment and an immediately subsequent route segment using the GUI.

7. (Withdrawn) The method of claim 1, wherein the input device comprises at least one of a keypad, a knob, and an audio input device.

8. (Withdrawn) A method to display a route comprising a sequence of route segments to be traveled by a vehicle, the method comprising:

providing a display screen adapted to display an output of a graphic user interface (GUI), said output corresponding to a GUI screen;

determining a plurality of GUI screens, each said GUI screen corresponding to a distinct route segment;

displaying a first GUI screen comprising a graphic representation of the vehicle and a route segment on which the vehicle is located;

receiving a user input; and

in response to said user input, displaying a second GUI screen comprising a graphic representation of one of a previous route segment and a subsequent route segment, wherein the second GUI screen does not include the route segment on which the vehicle is located.

9. (Withdrawn) The method of claim 8, further comprising updating the displayed route segment in response to movement of the vehicle.

10. (Withdrawn) The method of claim 8, wherein the GUI screen comprises a display area having a top edge.

11. (Withdrawn) The method of claim 10, wherein the graphic representation of the vehicle is substantially centered relative to the display area.

12. (Withdrawn) The method of claim 10, wherein the top edge of the display area is associated with one of a north cardinal direction and a forward direction of travel.

13. (Withdrawn) The method of claim 8, wherein the input device comprises at least one of a keypad, a knob, and an audio input device.

14. A navigation system for use in a vehicle, the navigation system comprising:

a display screen;

a global positioning system (GPS) receiver configured to determine a position of the vehicle;

a data retrieval device configured to retrieve navigation data from a data storage medium, the navigation data representing a sequence of route segments; and

a processor-based subsystem operatively coupled to the GPS receiver, the data retrieval device, and the display device, said processor-based subsystem comprising a graphic user interface (GUI) for outputting a GUI screen to said display screen, said output corresponding to a GUI screen; said processor-based subsystem configured to determine a position of the vehicle;

identify a route segment on which the vehicle is located as a function of the position of the vehicle;

render a first GUI screen comprising the identified route segment;

determine a second GUI screen that comprises a previous route segment or a subsequent route segment that does not include the identified route segment;

receive a user input via an input device; and

render the second GUI screen in response to the user input.

15. The navigation system of claim 14, wherein the processor-based subsystem is further configured to render a different GUI screen comprising a different one of the route segments in response to movement of the vehicle.

16. The navigation system of claim 14, wherein the first GUI screen comprises:

a display area having a top edge; and

a graphic representation of the vehicle rendered within the display area.

17. The navigation system of claim 16, wherein the graphic representation of the vehicle is substantially centered relative to the display area.

18. The navigation system of claim 16, wherein the top edge of the display area is associated with one of a north cardinal direction and a forward direction of travel.

19. The navigation system of claim 14, wherein rendering the second GUI screen in response to the user input comprises providing a graphic representation of at least one of an immediately previous route segment and an immediately subsequent route segment.

20. The navigation system of claim 14, wherein the input device comprises at least one of a keypad, a knob, and an audio input device.

21. A navigation system for use in a vehicle, the navigation system comprising:

a display device;

an input device;

a global positioning system (GPS) receiver configured to determine a position of the vehicle;

a data retrieval device configured to retrieve navigation data from a data storage medium, the navigation data representing a sequence of route segments; and

a processor-based subsystem operatively coupled to the GPS receiver, the data retrieval device, the display device, and the input device, said processor-based subsystem comprising a graphic user interface (GUI) for outputting a GUI screen to said display screen; said processor-based subsystem configured to

determine a plurality of route segments for a route and a plurality of GUI screens such that each route segment is represented in a GUI screen;

display a first GUI screen comprising a graphic representation of the vehicle and a route segment on which the vehicle is located;

receive a user input using the input device; and

display a second GUI screen in response to the user input, said second GUI screen comprising one of a previous route segment and a subsequent route segment that does not include the location of the vehicle.

22. The navigation system of claim 21, wherein the processor-based subsystem is further configured to display an updated route segment in response to movement of the vehicle.

23. The navigation system of claim 21, wherein the GUI screen comprises a display area having a top edge.

24. The navigation system of claim 23, wherein the graphic representation of the vehicle is substantially centered relative to the display area.

25. The navigation system of claim 21, wherein the top edge of the display area is associated with one of a north cardinal direction and a forward direction of travel.

26. The navigation system of claim 21, wherein the input device comprises at least one of a keypad, a knob, and an audio input device.

27. (Withdrawn) A processor-readable medium containing processor-executable instructions that, when executed by a processor-based system in a vehicle, cause the processor-based system to:

determine a position of the vehicle;

retrieve route information representing a route comprising a sequence of route segments;

determine a plurality of display screens renderable by a graphic user interface (GUI), each display screen corresponding to a graphic representation of a route segment,

identify a route segment on which the vehicle is located as a function of the position of the vehicle;

render a first graphic representation of the identified route segment using a said graphic user interface (GUI);

receive a user input via an input device; and

render a second graphic representation of a previous route segment or a subsequent route segment that does not include the identified route segment, said second graphic representation being rendered using the GUI in response to the user input.

28. (Withdrawn) The processor-readable medium of claim 27, wherein the processor-executable instructions, when executed by the processor-based system, further cause the processor-based system to render a different one of the route segments using the GUI in response to movement of the vehicle.

29. (Withdrawn) The processor-readable medium of claim 27, wherein the GUI comprises:

a display area having a top edge; and

a graphic representation of the vehicle rendered within the display area.

30. (Withdrawn) The processor-readable medium of claim 29, wherein the graphic representation of the vehicle is substantially centered relative to the display area.

31. (Withdrawn) The processor-readable medium of claim 29, wherein the top edge of the display area is associated with one of a north cardinal direction and a forward direction of travel.

32-38. (Canceled)

39. (Withdrawn) The processor-readable medium of claim 28, wherein the processor-executable instructions, when executed by the processor-based system, further cause the processor-based system to render one of a previous route segment and a subsequent route segment using the GUI.

40. (Withdrawn) A processor-readable medium containing processor-executable instructions that, when executed by a processor-based system in a vehicle, cause the processor-based system to:

retrieve route information representing a route comprising a sequence of route segments;

display a first graphic representation of the vehicle and a route segment on which the vehicle is located using a graphic user interface (GUI);

determine a second graphic representation of a previous route segment of a subsequent route segment that does not include the route segment on which the vehicle is located;

receive a user input via an input device; and

display the second graphic representation using the GUI in response to the user input.

41. (Withdrawn) The processor-readable medium of claim 40, wherein the processor-executable instructions, when executed by the processor-based system, further cause the processor-based system to display an updated route segment in response to movement of the vehicle.

42. (Withdrawn) The processor-readable medium of claim 40, wherein the graphic representation of the route segment comprises a display area having a top edge.

43. (Withdrawn) The processor-readable medium of claim 42, wherein the graphic representation of the vehicle is substantially centered relative to the display area.

44. (Withdrawn) The processor-readable medium of claim 40, wherein the top edge of the display area is associated with one of a north cardinal direction and a forward direction of travel.

APPENDIX B: EVIDENCE

There is no evidence submitted during this application under 37 CFR 1.130, 1.131 or 1.132 or any evidence entered by the Examiner and relied upon by Applicants in the appeal.

APPENDIX C: RELATED PROCEEDINGS

There are no related appeals or interferences pending during this appeal.